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A note on minimal and maximal ideals of ordered semigroups

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Abstract

Ideals of ordered groupoids were defined by second author in [2]. Considering the question under what conditions an ordered semigroup (or semigroup) contains at most one maximal ideal we prove that in an ordered groupoid S without zero there is at most one minimal ideal which is the intersection of all ideals of S. In an ordered semigroup, for which there exists an element a ∈ S such that the ideal of S generated by a is S, there is at most one maximal ideal which is the union of all proper ideals of S. In ordered semigroups containing unit, there is at most one maximal ideal which is the union of all proper ideals of S.